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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,071	04/08/2004	Daniel J. Fisher	59554US002	9195
32692	7590	07/31/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			MULLER, BRYAN R	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/821,071

Applicant(s)

FISHER, DANIEL J.

Examiner

Bryan R. Muller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16, 28-34, 37, 38 and 41 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 14, 15, 28-34, 37, 38 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/16/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: the word "surrace" in line 2 of claim 4 should be changed to "surface". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant includes in the claim, which appears to be directed only to a conversion pad, several limitations of the abrasive article making it unclear if the applicant is intending to claim the combination of the conversion pad and the abrasive article or just the conversion pad, in which case the limitations to the abrasive article and connection, thereto are all intended use and have no weight on the claim.
4. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the applicant is intending to claim a combination of a conversion pad and a back-up pad or only the conversion pad. The preamble of the claim leads the examiner to believe that the applicant is only claiming the

conversion pad, in which case, the attachment or engagement of the conversion pad with a back-up pad is merely intended use.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 14, 15 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kleemeier et al (3,527,001).

7. In reference to claim 1, Kleemeier discloses a conversion pad (either 13, 14 & 15 or 14 & 15 alone) for attaching an abrasive article to the back-up-pad (13) of a sanding tool, said conversion pad having an attachment system comprising a first major surface including an attachment region (15) with attachment material for attachment with an associated mating surface, and a non-attachment region along at least a portion of an edge (there is clearly an annular portion around the outer edge of the first major surface that does not have any attachment material) of said first major surface for forming an attachment with the associated mating surface that is weaker (the lack of attachment material will provide no attachment, which is weaker than the attachment between attachment region and the associated mating surface) than the attachment between the attachment region and the associated mating surface, whereby a user can inherently

grasp a portion of the abrasive article adjacent the non-attachment region and thereby separate the abrasive article from the first major surface.

8. In reference to claim 2, Kleemeier further discloses that said attachment system comprises a first major surface of said conversion pad, said conversion pad having a second major surface opposite said first major surface adapted to engage the sanding tool (10).

9. In reference to claim 3, Kleemeier further discloses that said associated mating surface comprises a first major surface of the abrasive article, said abrasive article having a second major surface opposite said first major surface including abrasive for abrading a work surface, and further wherein the attachment region is configured to form a releasable connection between said first major surface of said abrasive article and said conversion pad, said releasable connection characterized as being sufficiently secure to resist relative movement of said abrasive article relative to said conversion pad when rotating said abrasive article as part of a sanding operation (col. 2, lines 6-11).

10. In reference to claim 4, Kleemeier further discloses that said attachment region comprises a centrally located region of said first major surface and said non-attachment region comprises a continuous edge region extending around the entire perimeter of said first major surface, as discussed supra.

11. In reference to claim 5, Kleemeier further discloses that said attachment surface comprises a plurality of mechanical fastening elements.

12. In reference to claim 6, Kleemeier further discloses that said mechanical fastening elements comprise hook-type fastening elements (seen in figures 3 and 4).

13. In reference to claim 7, Kleemeier further discloses that said attachment region is a circular region covering a majority of said first major surface and said non-attachment region comprises an annular region extending around the entire perimeter of said major surface.

14. In reference to claim 14, Kleemeier further discloses that said attachment region and said non-attachment region are co-planar. The resin layer (14) which forms the non-attachment region has one end of the attachment members (16 or 17) of the attachment region disposed therein, thus the attachment region and non-attachment region have sections that are located within the same plane and are thus, co-planar.

15. In reference to claim 15, Kleemeier further discloses that the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges (in the case that the conversion pad is considered to be layers 13, 14 & 15 all used together).

16. In reference to claim 28, Kleemeier discloses a conversion pad (either 13, 14 & 15 or 14 & 15 alone) for attaching an abrasive article to the back-up pad (the attachment to a back-up pad is intended use, however, in the case that the conversion pad is layers 14 and 15, the conversion pad is attached to back-up pad 15 or in the case that the conversion pad is considered to be layers 13, 14 and 15, the conversion pad is inherently capable of being attached to a back-up pad), said conversion pad comprising a pad having first and second opposed major surfaces, said first major

surface being adapted for engagement with the back-up pad (again, intended use, but both interpretations of the conversion pad of Kleemeier are inherently capable of engagement with the back-up pad) and said second major surface including an attachment surface including attachment material (15) for attaching said conversion pad with the abrasive article and a non-attachment surface along at least a portion of an edge region of said second surface (there is clearly an annular portion around the outer edge of the first major surface that does not have any attachment material), thereby to allow a user to grasp the abrasive article and separate the abrasive article from the conversion pad.

17. In reference to claim 29, Kleemeier further discloses that said non-attachment region comprises a continuous edge region extending along the entire perimeter of said second surface, as discussed supra.

18. In reference to claim 30, Kleemeier further discloses that said attachment surface comprises a plurality of mechanical fastening elements.

19. In reference to claim 31, Kleemeier further discloses that said mechanical fastening elements comprise hook-type fastening elements (seen in figures 3 and 4).

20. In reference to claim 32, Kleemeier further discloses that said conversion pad is circular and said non-attachment region comprises an annular region extending along the entire perimeter of said second surface.

***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 8, 9, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleemeier (3,527,001) in view of Long et al (6,210,389).

23. In reference to claims 8 and 9, Kleemeier discloses the attachment system as discussed supra, wherein the non-attachment region of Kleemeier inherently provides an area that allows a user to easily grip the abrasive article for removal, but fails to disclose that the non-attachment region includes fastening elements that have been bent to inhibit attachment of said fastening elements with said associated mating surfaces. Long discloses a fastening system with a lifting region that provides a hook and loop fastening system with an attachment region (52) and a non-attachment region (41) wherein the hook-type fastening elements of the non-attachment region are bent to inhibit attachment of said fastening elements. The attachment system of Long would be more versatile because the attachment material is attached to the entire surface and any desired portion of the hook-type fasteners may be bent to provide a non-attachment region. Also, the hook-type fastening elements are easily bent to inhibit fastening, so it would be easier to produce the conversion pad by merely cutting or forming a piece of material to the desired shape and size, having the hook-type fasteners over the entire surface and modifying the desired portion to be the non-attaching region than to produce the conversion pad disclosed by Kleemeier, which is custom formed so that



only certain portions of the pad contain the hook-type fasteners. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide one entire surface of the Kleemeier invention with hook-type fastening elements and to bend the hook-type elements in the region that is desired to be non-attaching (in this case around the entire perimeter of the surface), as taught by Long, to provide any desired portion of the attachment surface as the non-attachment region.

24. In reference to claim 33, the conversion pad of claims 28 and 30-32, as disclosed by Kleemeier fails to disclose that the non-attachment region includes fastening elements that have been altered to inhibit attachment of the conversion pad with the abrasive pad. Long discloses the fastening system and teaches the advantages of bending the fastening elements, as discussed supra. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide one entire surface of the Kleemeier invention with hook-type fastening elements and to bend the hook-type elements in the region that is desired to be non-attaching, as taught by Long, as discussed supra.

25. In reference to claim 34, Kleemeier further discloses that the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges (in the case that the conversion pad is layers 13, 14 & 15).

26. Claims 37, 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleemeier (3,527,001).

27. In reference to claim 37, Kleemeier discloses an abrading tool including a back-up pad (13), a conversion pad (14 and 15) connected with the back-up pad (layer 13 is adhered to layer 14; col. 2, lines 41-43), and an abrasive article (20) connected with the conversion pad, wherein the back-up pad and the abrasive article have substantially the same profile and have aligned outer edges, and further wherein the conversion pad comprises first and second opposed major surfaces, said second major surface including an attachment region including attachment material (15) for attaching said conversion pad with the abrasive article and a non-attachment region along at least a portion of an edge region (there is clearly an annular portion around the outer edge of the first major surface that does not have any attachment material) of said second surface, thereby to allow a user to grasp the abrasive article and thereby separate the abrasive article from the conversion pad. However, Kleemeier fails to disclose that the conversion pad also has the same profile and aligned outer edges with the back-up pad and the abrasive article. It is well known in the art that combinations of back-up pads, conversion pads and abrasive articles may often use combinations of different sized layers, specifically with circular abrasive pad combinations, the layers may have different diameters, and more commonly it is well known that all layers have the same profile and aligned outer edges (as can be seen in Ali 4,617,767, Edinger 6,394,887, Clemente 3,875,703 and Manor et al 5,807,161) in order to provide the outer edge of the abrasive article with sufficient support, because it is also well known that the outer edge of similar abrasive discs is often used more and has more pressure exerted thereon than the inner parts of the pad, thus, support of the outer region is necessary to

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prevent damage to the outer edges of the abrasive article. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that different sized combinations of back-up pad, conversion pad and abrasive article may be used with the Kleemeier apparatus and further obvious that it would have been desirable to provide a conversion pad of Kleemeier that has the same profile and aligned outer edges with the back-up pad and abrasive article to provide sufficient support to outer edges of the abrasive article, to prevent damage.

28. In reference to claim 38, Kleemeier further discloses that the back-up pad, conversion pad and abrasive article are circular.

29. In reference to claim 41, Kleemeier further discloses that the conversion pad is removably connected to the back-up pad. Kleemeier discloses that the back-up pad is adhered to the conversion pad, and it is inherent that the two parts, being connected with adhesive, may be removed from one another, either by peeling them apart or by using chemicals to break down the adhesives.

### ***Response to Arguments***

30. Applicant's arguments, see page 8, line 8 through line 24 of page 11, filed 4/25/2006, with respect to the rejection(s) of claim(s) 1-9, 14, 15, 28-34, 37 and 38 under 35 U.S.C. §102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kleemeier et al (3,527,001). However, applicant's arguments filed 4/25/2006, with reference to the rejections under 35 U.S.C. §103, using

Long et al (6,210,389) as a secondary reference, have been fully considered but they are not persuasive. The applicant's argues that Long is non-analogous art with Nagano (5,201,785) and the Long reference would have the same relation to the new base reference of Kleemeier. The applicant argues that the Long reference is neither from the same field of endeavor as the applicant's invention nor is reasonably pertinent to the particular problem with which the inventor is involved. The examiner agrees that the Long reference is not from the same overall field of endeavor (abrasive apparatus') as the applicant's invention or the base reference, however, the examiner maintains the Long reference as a secondary reference because the Long reference, along with the Kleemeier base reference both address the use of hook and loop fasteners to releasably connect two things and the Long reference addresses issues that are particularly pertinent to the problem with which the inventor is involved. The "inventor" in this case is referring to the inventor of the references used, not the applicant; it is not required that references are combined using the same motivation that the applicant uses to reach the claimed invention, only that a reasonable motivation is provided directly from a reference or that would have been obvious to one of ordinary skill in the art. The Kleemeier reference is dealing with a hook and loop type fastening structure to attach a conversion pad to an abrasive article and the Long reference addresses that a problem with hook and loop fasteners is that they may be difficult to separate, and provides the solution of providing a "lift region" that is formed by altering the hook type fasteners. Therefore, Long clearly provides motivation to provide any connection using hook and loop type fasteners with a "lift region" to make it easier to release the

connection and although the Kleemeier reference does not specifically address the issue of difficulty of removal of the hook and loop connection, the Long reference clearly states that it has been a problem in prior use of such fasteners. Specifically regarding the *In re Oetiker* case, the two references in question are using hooks for completely different uses, wherein the current issue is relating two references that use hook and loop fasteners to releasably connect two parts. Therefore, the references clearly deal with the same use of the same type of structure, making the references relevant to one another with regard to the connecting structure.

### ***Conclusion***

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ali (4,617,767) discloses a sanding tool having a conversion pad similar to the applicant's claimed conversion pad and provides a non-attachment portion, as part of the support structure, that is present for the same purposes that the applicant discloses in the specification of the current application. Also, Edinger (6,394,887), Clemente (3,875,703) and Manor et al (5,807,161) all disclose sanding apparatus' having similar structure to the applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan R. Muller whose telephone number is (571) 272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BRM BRM  
7/13/2006



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